Calculus 1 Workbook

Chain rule

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MATH

WITH POWER RULE

1. Find $h'(x)$ if $h(x) = (3x^2 - 7)^4$.

2. Find $h'(x)$ if $h(x) = 2(5x^2 + 2x)^3$.

3. Find $h'(x)$ if $h(x) = (2x^2 - 6x + 5)^7$.

4. Find $h'(x)$ if $h(x) = 2(x^3 + 4x^2 - 2x)^5$.

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WITH PRODUCT RULE

1. Find $y'(x)$ if $y(x) = (3x - 2)(5x^3)^5$.

2. Find $h'(x)$ if $h(x) = (x^2 - 5x)^2(2x^3 - 3x^2)^5$.

3. Find $h'(x)$ if $h(x) = (x + 4)^5(3x - 2)^3$.

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WITH QUOTIENT RULE

■ 1. Find $h'(x)$.

$$h(x) = \frac{(2x+1)^3}{(3x-2)^2}$$

■ 2. Find $h'(x)$.

$$h(x) = \frac{(4x+5)^5}{(x+3)^2}$$

■ 3. Find $h'(x)$.

$$h(x) = \frac{(7x-4)^3}{(5x+3)^2}$$

■ 4. Find $h'(x)$.

$$h(x) = \frac{(6x-1)^4}{(8x+1)^2}$$

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WITH TRIG FUNCTIONS

1. Find $f'(x)$ if $f(x) = -5\cos^2(3x - 4)$.

2. Find $g'(x)$ if $g(x) = 6\sin^3(5x + 2)$.

3. Find $h'(x)$ if $h(x) = \tan^3(7x^2 + 3x)$.

4. Find $k'(x)$ if $k(x) = 3\sin^2(2x^2 + 4x - 9)$.

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